

Larval fish collected and identified along the California Coast

Since the mid-1980s Tenera has conducted a large number of studies of the ichthyoplankton along the California coastline from San Francisco Bay and the Sacramento-San Joaquin River Delta to San Diego Bay. The following are lists of the larval fish collected and identified by Tenera from the various locations. All collections were conducted using 335 micron mesh plankton nets. Written field and laboratory procedures with QA/QC reviews were used throughout all of these studies. All identifications were completed using a variety of references including but not limited to Moser 1996, Matarese et al 1989, Feeney 1992, and the Alaska Fisheries Science Center website (<http://access.afsc.noaa.gov/ichthyo/index.cfm>). The identification of some of the *Sebastes* was determined and verified by DNA analysis. The size range of many of the fish was determined by using a microscope based image analysis software program with customized add-ons. Tenera has also worked with larval otoliths to assist in determining an age/length relationship for certain of the collected larval fish families.

Larval fish collection locations:

- Sacramento-San Joaquin River Delta¹
- San Francisco Bay
- Moss Landing and Elkhorn Slough
- Morro Bay National Estuary
- Central California Outer Coast
- Offshore of Ventura
- Santa Monica Bay
- Offshore of Los Angeles
- Alamitos Bay and LA/LB Harbor Complex
- Los Angeles Outer Coast
- San Diego Outer Coast
- Aqua Hedionda Lagoon and outer coast
- San Diego Bay

Larval fish collected and identified from Sacramento-San Joaquin River Delta

Order	Family	Taxon	Common Name
Clupeiformes	Clupeidae	<i>Clupea pallasii</i>	Pacific herring
	Clupeidae	<i>Dorosoma petenense</i>	threadfin shad
	Engraulidae	<i>Engraulis mordax</i>	northern anchovy
Osmeriformes	Osmeridae	<i>Hypomesus nipponensis</i>	Wakasagi smelt
	Osmeridae	<i>Hypomesus pretiosus</i>	surf smelt
	Osmeridae	<i>Hypomesus transpacificus</i>	delta smelt
	Osmeridae	<i>Spirinchus thaleichthys</i>	longfin smelt
Cypriniformes	Catostomidae	<i>Catostomus occidentalis</i>	Sacramento sucker
	Cyprinidae	<i>Carassius auratus</i>	goldfish
	Cyprinidae	<i>Cyprinus</i> spp.	common carp
	Cyprinidae	<i>Lavinia exilicauda</i>	hitch
	Cyprinidae	<i>Notemigonus crysoleucas</i>	golden shiner
	Cyprinidae	<i>Orthodon microlepidotus</i>	Sacramento blackfish
	Cyprinidae	<i>Pogonichthys macrolepidotus</i>	splittail
Cyprinodontiformes	Fundulidae	<i>Lucania parva</i>	rainwater killifish
	Poeciliinae	<i>Gambusia affinis</i>	Western mosquitofish
Gasterosteiformes	Gasterosteidae	<i>Gasterosteus aculeatus</i>	threespine stickleback
	Syngnathidae	<i>Syngnathus leptorhynchus</i>	bay pipefish
Scorpaeniformes	Cottidae	<i>Cottus asper</i>	prickly sculpin
	Cottidae	<i>Leptocottus armatus</i>	Pacific staghorn sculpin
Perciformes	Centrarchidae	<i>Lepomis</i> spp.	sunfishes
	Centrarchidae	<i>Micropterus salmoides</i>	largemouth bass
	Centrarchidae	<i>Pomoxis nigromaculatus</i>	black crappie
	Embiotocidae	<i>Hysterocarpus traskii</i> (juvenile)	tule perch
	Gobiidae	<i>Acanthogobius flavimanus</i>	yellowfin goby
	Gobiidae	<i>Gillichthys mirabilis</i>	longjaw mudsucker
	Gobiidae	<i>Tridentiger</i> spp.	gobies
	Moronidae	<i>Morone saxatilis</i>	striped bass
	Percidae	<i>Percina macrolepida</i>	bigscale logperch
Atheriniformes	Atherinopsidae	<i>Atherinopsis californiensis</i>	jacksmelt
	Atherinopsidae	<i>Menidia beryllina</i>	inland silverside

Larval fish collected and identified from San Francisco Bay

Order	Family	Taxon	Common Name
Clupeiformes	Clupeidae	<i>Clupea pallasii</i>	Pacific herring
	Clupeidae	Clupeidae	herrings
	Engraulidae	Engraulidae	anchovies
	Engraulidae	<i>Engraulis mordax</i>	northern anchovy
Osmeriformes	Osmeridae	Osmeridae	smelts
Myctophiformes	Myctophidae	<i>Stenobrachius leucopsarus</i>	northern lampfish
Gadiformes	Gadidae	Gadidae	codfishes
	Gadidae	<i>Microgadus proximus</i>	Pacific tomcod
Ophidiiformes	Bythitidae	<i>Brosmophycis marginata</i>	red brotula
Atheriniformes	Atherinopsidae	<i>Atherinops affinis</i>	topsmelt
	Atherinopsidae	Atherinopsidae	silversides
	Atherinopsidae	<i>Atherinopsis californiensis</i>	jacksmelt
Gasterosteiformes	Syngnathidae	Syngnathidae	pipefishes
	Syngnathidae	<i>Syngnathus leptorhynchus</i>	bay pipefish
	Syngnathidae	<i>Syngnathus</i> spp.	pipefishes
Scorpaeniformes	Scorpaenidae	<i>Sebastes</i> spp.	rockfishes
	Hexagrammidae	Hexagrammidae	greenlings
	Hexagrammidae	<i>Ophiodon elongatus</i>	lingcod
	Hexagrammidae	<i>Oxylebius pictus</i>	painted greenling
	Cottidae	<i>Artedius lateralis</i>	smoothhead sculpin
	Cottidae	<i>Artedius</i> spp.	sculpins
	Cottidae	<i>Clinocottus analis</i>	wooly sculpin
	Cottidae	<i>Clinocottus</i> spp.	sculpins
	Cottidae	Cottidae	sculpins
	Cottidae	<i>Cottus asper</i>	prickly sculpin
	Cottidae	<i>Hemilepidotus spinosus</i>	brown Irish lord
	Cottidae	<i>Hemilepidotus</i> spp.	Irish lord
	Cottidae	<i>Leptocottus armatus</i>	Pacific staghorn sculpin
	Cottidae	<i>Oligocottus</i> spp.	sculpins
	Cottidae	<i>Scorpaenichthys marmoratus</i>	cabezon
	Agonidae	<i>Odontopyxis trispinosa</i>	pygmy poacher
	Agonidae	<i>Stellerina xyosterna</i>	pricklebreast poacher
	Cyclopteridae	Cyclopteridae	snailfishes
	Cyclopteridae	<i>Liparis</i> spp.	snailfishes

(table continued)

Larval fish collected and identified from San Francisco Bay (continued)

Order	Family	Taxon	Common Name
Perciformes			
	Gobiesocidae	Gobiesocidae	clingfishes
	Gobiesocidae	<i>Gobiesox</i> spp.	clingfishes
	Sciaenidae	<i>Genyonemus lineatus</i>	white croaker
	Sciaenidae	Sciaenidae	croakers
	Sciaenidae	<i>Seriphus politus</i>	queenfish
	Bathymasteridae	Bathymasteridae	ronquils
	Blennidae	<i>Hypsoblennius</i> spp.	combtooth blennies
	Clinidae	<i>Gibbonsia</i> spp.	kelpfishes
	Clinidae	<i>Heterostichus rostratus</i>	giant kelpfish
	Chaenopsidae	Chaenopsidae	tube blennies
	Stichaeidae	<i>Cebidichthys violaceus</i>	monkeyface eel
	Stichaeidae	Stichaeidae	pricklebacks
	Pholidae	Pholidae	gunnels
	Ammodytidae	<i>Ammodytes hexapterus</i>	Pacific sand lance
	Ammodytidae	Ammodytidae	sand lances
	Gobiidae	<i>Acanthogobius flavimanus</i>	yellowfin goby
	Gobiidae	CI goby complex	gobies
	Gobiidae	<i>Clevelandia ios</i>	arrow goby
	Gobiidae	<i>Gillichthys mirabilis</i>	longjaw mudsucker
	Gobiidae	<i>Ilypnus gilberti</i>	cheekspot goby
	Gobiidae	<i>Lepidogobius lepidus</i>	bay goby
	Gobiidae	<i>Rhinogobiops nicholsi</i>	blackeye goby
Pleuronectiformes			
	Pleuronectidae	<i>Isopsetta isolepis</i>	butter sole
	Pleuronectidae	<i>Parophrys vetulus</i>	English sole
	Pleuronectidae	<i>Platichthys stellatus</i>	starry flounder
	Pleuronectidae	<i>Pleuronectes bilineatus</i>	rock sole
	Pleuronectidae	Pleuronectidae	righteye flounders
	Pleuronectidae	<i>Pleuronichthys guttulatus</i>	diamond turbot
	Pleuronectidae	<i>Pleuronichthys</i> spp.	turbots
	Pleuronectidae	<i>Pleuronichthys verticalis</i>	hornyhead turbot
	Pleuronectidae	<i>Psettichthys melanostictus</i>	sand sole
	Paralichthyidae	<i>Citharichthys sordidus</i>	Pacific sanddab
	Paralichthyidae	<i>Citharichthys</i> spp.	sanddabs
	Paralichthyidae	<i>Citharichthys stigmaeus</i>	speckled sanddab
	Paralichthyidae	Paralichthyidae	sand flounders
	Paralichthyidae	<i>Paralichthys californicus</i>	California halibut

CI gobies complex comprises larvae of *Clevelandia ios* and/or *Ilypnus gilberti*.

Larval fish collected and identified from Moss Landing and Elkhorn Slough

Order	Family	Taxon	Common Name
Clupeiformes	Clupeidae	<i>Clupea pallasii</i>	Pacific herring
	Clupeidae	Clupeidae	herrings
	Clupeidae	<i>Sardinops sagax</i>	Pacific sardine
	Engraulidae	<i>Engraulis mordax</i>	northern anchovy
Osmeriformes	Osmeridae	Osmeridae	smelts
	Argentinidae	<i>Argentina sialis</i>	Pacific argentine
Myctophiformes	Myctophidae	<i>Leuroglossus stilbius</i>	California smoothtongue
	Myctophidae	<i>Lipolagus ochotensis</i>	popeye blacksmelt
	Myctophidae	<i>Stenobranchius leucopsarus</i>	northern lampfish
	Myctophidae	<i>Tarletonbeania crenularis</i>	blue lanternfish
Cypriniformes	Catostomidae	<i>Catostomus occidentalis</i>	Sacramento sucker
Ophidiiformes	Ophidiidae	Ophidiidae	cusks-eels
	Bythitidae	<i>Brosmophycis marginata</i>	red brotula
Belonodei	Scomberesocidae	<i>Cololabis saira</i>	Pacific saury
Atheriniformes	Atherinopsidae	<i>Atherinops affinis</i>	topsmelt
	Atherinopsidae	Atherinopsidae	silversides
	Atherinopsidae	<i>Atherinopsis californiensis</i>	jacksmelt
	Atherinopsidae	<i>Leuresthes tenuis</i>	California grunion
Gasterosteiformes	Aulorhynchidae	<i>Aulorhynchus flavidus</i>	tubesnout
	Gasterosteidae	<i>Gasterosteus aculeatus</i>	threespine stickleback
	Syngnathidae	Syngnathidae	pipefishes
	Syngnathidae	<i>Syngnathus</i> spp.	pipefishes
Scorpaeniformes	Scorpaenidae	<i>Sebastes aurora</i>	aurora rockfish
	Scorpaenidae	<i>Sebastes diploproa</i>	splitnose rockfish
	Scorpaenidae	<i>Sebastes jordani</i>	shortbelly rockfish
	Scorpaenidae	<i>Sebastes</i> spp.	rockfishes
	Scorpaenidae	<i>Sebastolobus</i> spp.	thornyheads
	Hexagrammidae	Hexagrammidae	greenlings
	Hexagrammidae	<i>Ophiodon elongatus</i>	lingcod
	Hexagrammidae	<i>Oxylebius pictus</i>	painted greenling
	Hexagrammidae	<i>Zaniolepis</i> spp.	combfishes
	Cottidae	<i>Artedius lateralis</i>	smoothhead sculpin
	Cottidae	<i>Artedius</i> spp.	sculpins
	Cottidae	<i>Clinocottus analis</i>	wooly sculpin
	Cottidae	Cottidae	sculpins

(table continued)

Larval fish collected and identified from Moss Landing and Elkhorn Slough (continued)

Order	Family	Taxon	Common Name
Scorpaeniformes (continued)			
	Cottidae	<i>Cottus asper</i>	prickly sculpin
	Cottidae	<i>Leptocottus armatus</i>	Pacific staghorn sculpin
	Cottidae	<i>Oligocottus</i> spp.	sculpins
	Cottidae	<i>Ruscarius creaseri</i>	roughcheek sculpin
	Cottidae	<i>Scorpaenichthys marmoratus</i>	cabezon
	Agonidae	Agonidae	poachers
	Agonidae	<i>Xeneretmus latifrons</i>	blackeye poacher
	Liparidae	<i>Liparis fucensis</i>	slipskin snailfish
	Liparidae	<i>Liparis</i> spp.	snailfishes
Perciformes			
	Gobiesocidae	Gobiesocidae	clingfishes
	Gobiesocidae	<i>Gobiesox</i> spp.	clingfishes
	Sciaenidae	<i>Genyonemus lineatus</i>	white croaker
	Bathymasteridae	Bathymasteridae	ronquils
		Blennioidei	blennies
	Blennidae	<i>Hypsoblennius</i> spp.	combtooth blennies
	Clinidae	<i>Gibbonsia</i> spp.	kelpfishes
	Chaenopsidae	Chaenopsidae	tube blennies
	Stichaeidae	<i>Cebidichthys violaceus</i>	monkeyface eel
	Stichaeidae	Stichaeidae	pricklebacks
	Pholidae	Pholidae	gunnels
	Ammodytidae	<i>Ammodytes hexapterus</i>	Pacific sand lance
	Gobiidae	CIQ goby complex	gobies
	Gobiidae	<i>Gillichthys mirabilis</i>	longjaw mudsucker
	Gobiidae	<i>Lepidogobius lepidus</i>	bay goby
	Gobiidae	<i>Rhinogobiops nicholsi</i>	blackeye goby
	Gobiidae	<i>Typhlogobius californiensis</i>	blind goby
Pleuronectiformes			
	Pleuronectidae	<i>Glyptocephalus zachirus</i>	rex sole
	Pleuronectidae	<i>Isopsetta isolepis</i>	butter sole
	Pleuronectidae	<i>Lyopsetta exilis</i>	slender sole
	Pleuronectidae	<i>Parophrys vetulus</i>	English sole
	Pleuronectidae	<i>Platichthys stellatus</i>	starry flounder
	Pleuronectidae	<i>Pleuronectes bilineatus</i>	rock sole
	Pleuronectidae	Pleuronectidae	righteye flounders
	Pleuronectidae	<i>Pleuronichthys verticalis</i>	hornyhead turbot
	Pleuronectidae	<i>Psettichthys melanostictus</i>	sand sole
	Paralichthyidae	<i>Citharichthys sordidus</i>	Pacific sanddab
	Paralichthyidae	<i>Citharichthys stigmaeus</i>	speckled sanddab
	Paralichthyidae	Paralichthyidae	sand flounders
	Paralichthyidae	<i>Paralichthys californicus</i>	California halibut

CIQ gobies complex comprises larvae of *Clevelandia ios*, *Ilypnus gilberti* and/or *Quietula y-cuada*.

Larval fish collected and identified from Morro Bay National Estuary

Order	Family	Taxon	Common Name
Clupeiformes	Clupeidae	<i>Clupea pallasii</i>	Pacific herring
	Clupeidae	Clupeidae	herrings
	Clupeidae	<i>Sardinops sagax</i>	Pacific sardine
	Engraulidae	<i>Engraulis mordax</i>	northern anchovy
Osmeriformes	Osmeridae	Osmeridae	smelts
	Argentinidae	<i>Argentina sialis</i>	Pacific argentine
Myctophiformes	Myctophidae	<i>Diaphus theta</i>	California headlight fish
	Myctophidae	<i>Diogenichthys atlanticus</i>	longfin lanternfish
	Myctophidae	<i>Lipolagus ochotensis</i>	popeye blacksmelt
	Myctophidae	Myctophidae	lanternfishes
	Myctophidae	<i>Nannobranchium regalis</i>	pinpoint lanternfish
	Myctophidae	<i>Nannobranchium ritteri</i>	broadfin lampfish
	Myctophidae	<i>Nannobranchium</i> spp.	lanternfishes
	Myctophidae	<i>Stenobranchius leucopsarus</i>	northern lampfish
	Myctophidae	<i>Sternoptyx</i> spp.	hatchetfishes
Gadiformes	Merlucciidae	<i>Merluccius productus</i>	Pacific hake
Ophidiiformes	Bythitidae	<i>Brosmophycis marginata</i>	red brotula
Atheriniformes	Atherinopsidae	<i>Atherinops affinis</i>	topsmelt
	Atherinopsidae	Atherinopsidae	silversides
	Atherinopsidae	<i>Atherinopsis californiensis</i>	jacksmelt
Lampridiformes	Trachipteridae	Trachipteridae	ribbon fishes
	Trachipteridae	<i>Trachipterus altivelis</i>	king-of-the-salmon
Gasterosteiformes	Aulorhynchidae	<i>Aulorhynchus flavidus</i>	tubesnout
	Syngnathidae	Syngnathidae	pipefishes
	Syngnathidae	<i>Syngnathus leptorhynchus</i>	bay pipefish
	Syngnathidae	<i>Syngnathus</i> spp.	pipefishes
Scorpaeniformes	Scorpaenidae	<i>Sebastes aurora</i>	aurora rockfish
	Scorpaenidae	<i>Sebastes</i> spp.	rockfishes
	Scorpaenidae	<i>Sebastolobus</i> spp.	thornyheads
	Hexagrammidae	Hexagrammidae	greenlings
	Hexagrammidae	<i>Oxylebius pictus</i>	painted greenling
	Hexagrammidae	<i>Zaniolepis frenata</i>	shortspine combfish
	Hexagrammidae	<i>Zaniolepis</i> spp.	combfishes

(table continued)

Larval fish collected and identified from Morro Bay National Estuary (continued)

Order	Family	Taxon	Common Name
Scorpaeniformes (continued)			
	Cottidae	<i>Artedius lateralis</i>	smoothhead sculpin
	Cottidae	<i>Artedius</i> spp.	sculpins
	Cottidae	<i>Clinocottus analis</i>	wooly sculpin
	Cottidae	Cottidae	sculpins
	Cottidae	<i>Cottus asper</i>	prickly sculpin
	Cottidae	<i>Icelinus</i> spp.	sculpins
	Cottidae	<i>Leptocottus armatus</i>	Pacific staghorn sculpin
	Cottidae	<i>Oligocottus maculosus</i>	tidepool sculpin
	Cottidae	<i>Oligocottus</i> spp.	sculpins
	Cottidae	<i>Orthonopias triacis</i>	snubnose sculpin
	Cottidae	<i>Radulinus</i> spp.	sculpins
	Cottidae	<i>Ruscarius creaseri</i>	roughcheek sculpin
	Cottidae	<i>Ruscarius</i> spp.	sculpins
	Cottidae	<i>Scorpaenichthys marmoratus</i>	cabezon
	Agonidae	Agonidae	poachers
	Agonidae	<i>Odontopyxis trispinosa</i>	pygmy poacher
	Liparidae	<i>Liparis fucensis</i>	slipskin snailfish
	Liparidae	<i>Liparis</i> spp.	snailfishes
Perciformes			
	Gobiesocidae	<i>Gobiesox</i> spp.	clingfishes
	Haemulidae	Haemulidae	grunts
	Haemulidae	<i>Xenistius californiensis</i>	salema
	Sciaenidae	<i>Genyonemus lineatus</i>	white croaker
	Sciaenidae	Sciaenidae	croakers
	Sciaenidae	<i>Seriphus politus</i>	queenfish
	Bathymasteridae	Bathymasteridae	ronquils
		Blennioidei	blennies
	Blennidae	<i>Hypsoblennius</i> spp.	combtooth blennies
	Clinidae	Clinidae	kelp blennies
	Clinidae	<i>Gibbonsia</i> spp.	kelpfishes
	Chaenopsidae	Chaenopsidae	tube blennies
	Chaenopsidae	<i>Neoclinus</i> spp.	fringeheads
	Stichaeidae	<i>Cebidichthys violaceus</i>	monkeyface eel
	Stichaeidae	Stichaeidae	pricklebacks
	Pholidae	Pholidae	gunnels
	Labrisomidae	Labrisomidae	labrisomid blennies
	Ammodytidae	<i>Ammodytes hexapterus</i>	Pacific sand lance
	Gobiidae	CIQ goby complex	gobies
	Gobiidae	<i>Gillichthys mirabilis</i>	longjaw mudsucker
	Gobiidae	<i>Lepidogobius lepidus</i>	bay goby
	Gobiidae	<i>Rhinogobiops nicholsi</i>	blackeye goby
	Gobiidae	<i>Typhlogobius californiensis</i>	blind goby
	Centrolophidae	<i>Icichthys lockingtoni</i>	medusa fish

CIQ gobies complex comprises larvae of *Clevelandia ios*, *Ilypnus gilberti* and/or *Quietula y-cuada*. (table continued)

Larval fish collected and identified from Morro Bay National Estuary (continued)

Order	Family	Taxon	Common Name
	Pleuronectidae	<i>Hypsopsetta</i> spp.	turbots
	Pleuronectidae	<i>Microstomus pacificus</i>	Dover sole
	Pleuronectidae	<i>Parophrys vetulus</i>	English sole
	Pleuronectidae	<i>Platichthys stellatus</i>	starry flounder
	Pleuronectidae	<i>Pleuronectes bilineatus</i>	rock sole
	Pleuronectidae	Pleuronectidae	righteye flounders
	Pleuronectidae	<i>Pleuronichthys</i> spp.	turbots
	Pleuronectidae	<i>Pleuronichthys verticalis</i>	hornyhead turbot
	Pleuronectidae	<i>Psettichthys melanostictus</i>	sand sole
	Paralichthyidae	<i>Citharichthys sordidus</i>	Pacific sanddab
	Paralichthyidae	<i>Citharichthys</i> spp.	sanddabs
	Paralichthyidae	<i>Citharichthys stigmaeus</i>	speckled sanddab
	Paralichthyidae	Paralichthyidae	sand flounders
	Paralichthyidae	<i>Paralichthys californicus</i>	California halibut

Larval fish collected and identified from central California Outer Coast

Order	Family	Taxon	Common Name
Clupeiformes	Clupeidae	Clupeidae	herrings
	Clupeidae	<i>Sardinops sagax</i>	Pacific sardine
	Engraulidae	Engraulidae	anchovies
	Engraulidae	<i>Engraulis mordax</i>	northern anchovy
Osmeriformes	Osmeridae	Osmeridae	smelts
	Osmeridae	<i>Spirinchus starksi</i>	night smelt
	Argentinidae	<i>Argentina sialis</i>	Pacific argentine
	Argentinidae	Argentinidae	argentinines
	Bathylagidae	Bathylagidae	blacksmelts
	Bathylagidae	<i>Bathylagus pacificus</i>	Pacific blacksmelt
	Bathylagidae	<i>Bathylagus</i> spp.	blacksmelts
	Bathylagidae	<i>Leuroglossus</i> spp.	smoothtongues
	Bathylagidae	<i>Leuroglossus stilbius</i>	California smoothtongue
	Bathylagidae	<i>Lipolagus ochotensis</i>	popeye blacksmelt
	Microstomatidae	<i>Microstoma</i> spp.	dusky pencilsmelts
Stomiiformes	Gonostomatidae	<i>Cyclothone signata</i>	showy bristlemouth
	Gonostomatidae	Cyclothone spp.	bristlemouths
	Gonostomatidae	Gonostomatidae	bristlemouths
	Sternoptuchidae	<i>Sternoptyx</i> spp.	hatchetfishes
	Stomiidae	<i>Chauliodus macouni</i>	Pacific viperfish
	Stomiidae	<i>Stomias atriventer</i>	black-belly dragonfish
	Phosichthyidae	<i>Vinciguerria lucetia</i>	Panama lightfish
	Phosichthyidae	<i>Vinciguerria poweriae</i>	highseas lightfish
Aulopiformes	Synodoniidae	<i>Synodus lucioceps</i>	California lizardfish
	Paralepididae	<i>Lestidiops ringens</i>	slender barracudina
Myctophiformes	Myctophidae	<i>Ceratoscopelus townsendi</i>	dogtooth lampfish
	Myctophidae	<i>Diaphus theta</i>	California headlight fish
	Myctophidae	<i>Diogenichthys atlanticus</i>	longfin lanternfish
	Myctophidae	<i>Diogenichthys laternatus</i>	diogenes lanternfish
	Myctophidae	<i>Diogenichthys</i> spp.	lanternfishes
	Myctophidae	<i>Hygophum atratum</i>	thickhead lanternfish
	Myctophidae	Myctophidae	lanternfishes
	Myctophidae	<i>Nannobranchium regalis</i>	pinpoint lanternfish
	Myctophidae	<i>Nannobranchium ritteri</i>	broadfin lampfish
	Myctophidae	<i>Nannobranchium</i> spp.	lanternfishes
	Myctophidae	<i>Lampancytus</i> spp.	possible lantern fish
	Myctophidae	<i>Protomyctophum crockeri</i>	California flashlightfish
	Myctophidae	<i>Stenobranchius leucopsarus</i>	northern lampfish
	Myctophidae	<i>Symbolophorus californiensis</i>	California lanternfish

(table continued)

Larval fish collected and identified from central California Outer Coast (continued)

Order	Family	Taxon	Common Name
Myctophiformes (continued)			
	Myctophidae	<i>Tarletonbeania crenularis</i>	blue lanternfish
	Myctophidae	<i>Triphoturus mexicanus</i>	Mexican lampfish
Batrachoidiformes			
	Batrachoididae	<i>Porichthys notatus</i>	plainfin midshipman
Gadiformes			
	Gadidae	Gadidae	codfishes
	Gadidae	<i>Microgadus proximus</i>	Pacific tomcod
	Merlucciidae	<i>Merluccius productus</i>	Pacific hake
	Merlucciidae	<i>Merluccius</i> spp.	hakes
Ophidiiformes			
	Bythitidae	<i>Cataetyx rubrirostris</i>	rubynose brotula
	Ophidiidae	<i>Chilara taylori</i>	spotted cusk-eel
	Ophidiidae	Ophidiidae	cusk-eels
	Ophidiidae	<i>Ophidion scrippsae</i>	basketweave cusk-eel
	Bythitidae	<i>Brosmophycis marginata</i>	red brotula
Beloniformes			
	Scomberesocidae	<i>Cololabis saira</i>	Pacific saury
Atheriniformes			
	Atherinopsidae	<i>Atherinops affinis</i>	topsmelt
	Atherinopsidae	Atherinopsidae	silversides
	Atherinopsidae	<i>Atherinopsis californiensis</i>	jacksmelt
	Atherinopsidae	<i>Leuresthes tenuis</i>	California grunion
Stephanobercyiformes			
	Melamphaidae	<i>Melamphaes parvus</i>	little bigscale
	Melamphaidae	<i>Melamphaes</i> spp.	big scales
	Melamphaidae	Melamphaidae	bigscale fishes
	Melamphaidae	<i>Poromitra crassiceps</i>	crested bigscale
Lampridiformes			
	Trachipteridae	<i>Trachipterus altivelis</i>	king-of-the-salmon
Gasterosteiformes			
	Aulorhynchidae	<i>Aulorhynchus flavidus</i>	tubesnout
	Syngnathidae	Syngnathidae	pipefishes
	Syngnathidae	<i>Syngnathus californiensis</i>	kelp pipefish
	Syngnathidae	<i>Syngnathus leptorhynchus</i>	bay pipefish
	Syngnathidae	<i>Syngnathus</i> spp.	pipefishes
Scorpaeniformes			
	Agonidae	Agonidae	poachers
	Agonidae	<i>Agonomalus mozinoi</i>	kelp poacher
	Agonidae	<i>Bothragonus swanii</i>	rockhead
	Agonidae	<i>Odontopyxis trispinosa</i>	pygmy poacher
	Agonidae	<i>Stellerina xyosterna</i>	pricklebreast poacher
	Cottidae	<i>Artedius harringtoni</i>	scalyhead sculpin

(table continued)

Larval fish collected and identified from central California Outer Coast (continued)

Order	Family	Taxon	Common Name
Scorpaeniformes (continued)			
	Cottidae	<i>Artedius lateralis</i>	smoothhead sculpin
	Cottidae	<i>Artedius meanyi</i>	Puget Sound sculpin
	Cottidae	<i>Artedius</i> spp.	sculpins
	Cottidae	<i>Chitonotus pugetensis</i>	roughback sculpin
	Cottidae	<i>Chitonotus/Icelinus</i> spp.	sculpins
	Cottidae	<i>Clinocottus analis</i>	wooly sculpin
	Cottidae	<i>Clinocottus</i> spp.	sculpins
	Cottidae	Cottidae	sculpins
	Cottidae	<i>Enophrys</i> spp.	buffalo sculpins
	Cottidae	<i>Enophrys taurina</i>	bull sculpin
	Cottidae	<i>Hemilepidotus spinosus</i>	brown Irish lord
	Cottidae	<i>Hemilepidotus</i> spp.	Irish lord
	Cottidae	<i>Icelinus quadriseriatus</i>	yellowchin sculpin
	Cottidae	<i>Icelinus</i> spp.	sculpins
	Cottidae	<i>Leptocottus armatus</i>	Pacific staghorn sculpin
	Cottidae	<i>Nautichthys oculo-fasciatus</i>	sailfin sculpin
	Cottidae	<i>Oligocottus maculosus</i>	tidepool sculpin
	Cottidae	<i>Oligocottus snyderi</i>	fluffy sculpin
	Cottidae	<i>Oligocottus</i> spp.	sculpins
	Cottidae	<i>Oligocottus/Clinocottus</i> spp.	sculpins
	Cottidae	<i>Orthonopias triacis</i>	snubnose sculpin
	Cottidae	<i>Radulinus asprellus</i>	slim sculpin
	Cottidae	<i>Radulinus</i> spp.	sculpins
	Cottidae	<i>Ruscarius creaseri</i>	roughcheek sculpin
	Cottidae	<i>Ruscarius meanyi</i>	Puget Sound sculpin
	Cottidae	<i>Ruscarius</i> spp.	sculpins
	Cottidae	<i>Scorpaenichthys marmoratus</i>	cabezon
	Cottidae	<i>Synchirus gilli</i>	manacled sculpin
	Cyclopteridae	Cyclopteridae	snailfishes
	Hexagrammidae	Hexagrammidae	greenlings
	Hexagrammidae	<i>Hexagrammos decagrammus</i>	kelp greenling
	Hexagrammidae	<i>Hexagrammos lagocephalus</i>	rock greenling
	Hexagrammidae	<i>Hexagrammos</i> spp.	greenlings
	Hexagrammidae	<i>Ophiodon elongatus</i>	lingcod
	Hexagrammidae	<i>Oxylebius pictus</i>	painted greenling
	Hexagrammidae	<i>Zaniolepis frenata</i>	shortspine combfish
	Hexagrammidae	<i>Zaniolepis latipinnis</i>	longspine combfish
	Hexagrammidae	<i>Zaniolepis</i> spp.	combfishes
	Liparidae	<i>Liparis mucosus</i>	slimy snailfish
	Liparidae	<i>Liparis pulchellus</i>	showy snailfish
	Liparidae	<i>Liparis</i> spp.	snailfishes

(table continued)

Larval fish collected and identified from central California Outer Coast (continued)

Order	Family	Taxon	Common Name
Scorpaeniformes (continued)			
	Scorpaenidae	<i>Sebastes atrovirens</i>	kelp rockfish
	Scorpaenidae	<i>Sebastes auriculatus</i>	brown rockfish
	Scorpaenidae	<i>Sebastes aurora</i>	aurora rockfish
	Scorpaenidae	<i>Sebastes carnatus/chrysomelas</i>	gopher/black & yellow rockfish
	Scorpaenidae	<i>Sebastes caurinus</i>	copper rockfish
	Scorpaenidae	<i>Sebastes constellatus</i>	starry rockfish
	Scorpaenidae	<i>Sebastes crocotulus</i>	sunset rockfish
	Scorpaenidae	<i>Sebastes diploproa</i>	splitnose rockfish
	Scorpaenidae	<i>Sebastes dalli</i>	calico rockfish
	Scorpaenidae	<i>Sebastes entomelas</i>	widow rockfish
	Scorpaenidae	<i>Sebastes flavidus</i>	yellowtail rockfish
	Scorpaenidae	<i>Sebastes gilli</i>	bronzespot rockfish
	Scorpaenidae	<i>Sebastes goodei</i>	chilipeppet
	Scorpaenidae	<i>Sebastes hopkinsi</i>	squarespot rockfish
	Scorpaenidae	<i>Sebastes jordani</i>	shortbelly rockfish
	Scorpaenidae	<i>Sebastes levis</i>	cow cod
	Scorpaenidae	<i>Sebastes mystinus</i>	blue rockfish
	Scorpaenidae	<i>Sebastes nebulosus</i>	china rockfish
	Scorpaenidae	<i>Sebastes paucispinis</i>	bocaccio
	Scorpaenidae	<i>Sebastes rastrelliger</i>	grass rockfish
	Scorpaenidae	<i>Sebastes rosaceus</i>	rosy rockfish
	Scorpaenidae	<i>Sebastes semicinctus</i>	halfbanded rockfish
	Scorpaenidae	<i>Sebastes serranoides</i>	olive rockfish
	Scorpaenidae	<i>Sebastes serricpes</i>	treefish
	Scorpaenidae	<i>Sebastes saxicola</i>	stripetail rockfish
	Scorpaenidae	<i>Sebastes</i> spp.	rockfishes
	Scorpaenidae	<i>Sebastolobus alascanus</i>	shortspine thornyhead
	Scorpaenidae	<i>Sebastolobus</i> spp.	thornyheads
Perciformes			
	Ammodytidae	<i>Ammodytes hexapterus</i>	Pacific sand lance
	Bathymasteridae	Bathymasteridae	ronquils
	Bathymasteridae	<i>Rathbunella</i> spp.	ronquils
	Blennidae	Blenniidae	blennies
	Blennidae	<i>Hypsoblennius gilberti</i>	rockpool blenny
	Blennidae	<i>Hypsoblennius jenkinsi</i>	mussel blenny
	Blennidae	<i>Hypsoblennius</i> spp.	combtooth blennies
	Carangidae	<i>Trachurus symmetricus</i>	jack mackerel
	Centrolophidae	<i>Icichthys lockingtoni</i>	medusa fish
	Chaenopsidae	Chaenopsidae	tube blennies
	Chaenopsidae	<i>Neoclinus</i> spp.	fringeheads
	Chaenopsidae	<i>Neoclinus uninotatus</i>	onespot fringehead

 Larval *Sebastes* identifications based on DNA analysis.

(table continued)

Larval fish collected and identified from central California Outer Coast (continued)

Order	Family	Taxon	Common Name
Perciformes			
	Clinidae	Clinidae	kelp blennies
	Clinidae	<i>Gibbonsia elegans</i>	spotted kelpfish
	Clinidae	<i>Gibbonsia metzi</i>	striped kelpfish
	Clinidae	<i>Gibbonsia</i> spp.	kelpfishes
	Clinidae	<i>Heterostichus rostratus</i>	giant kelpfish
	Gobiesocidae	Gobiesocidae	clingfishes
	Gobiesocidae	<i>Gobiesox maeandricus</i>	northern clingfish
	Gobiesocidae	<i>Gobiesox rhessodon</i>	California clingfish
	Gobiesocidae	<i>Gobiesox</i> spp.	clingfishes
	Gobiesocidae	<i>Rimicola muscarum</i>	kelp clingfish
	Gobiesocidae	<i>Rimicola</i> spp.	kelp clingfishes
	Gobiidae	<i>Acanthogobius flavimanus</i>	yellowfin goby
	Gobiidae	CIQ goby complex	gobies
	Gobiidae	<i>Gillichthys mirabilis</i>	longjaw mudsucker
	Gobiidae	<i>Lepidogobius lepidus</i>	bay goby
	Gobiidae	<i>Lethops connectens</i>	halfblind goby
	Gobiidae	<i>Lythrypnus dalli</i>	bluebanded goby
	Gobiidae	<i>Lythrypnus</i> spp.	gobies
	Gobiidae	<i>Lythrypnus zebra</i>	zebra goby
	Gobiidae	<i>Rhinogobiops nicholsi</i>	blackeye goby
	Gobiidae	<i>Typhlogobius californiensis</i>	blind goby
	Haemulidae	Haemulidae	grunts
	Haemulidae	<i>Xenistius californiensis</i>	salema
	Icosteidae	<i>Icosteus aenigmaticus</i>	ragfish
	Kyphosidae	<i>Girella nigricans</i>	opaleye
	Kyphosidae	Kyphosidae	sea chubs
	Labridae	Labridae	wrasses
	Labridae	<i>Oxyjulis californica</i>	senorita
	Labridae	<i>Semicossyphus pulcher</i>	California sheephead
	Labrisomidae	Labrisomidae	labrisomid blennies
	Pholidae	<i>Apodichthys fucorum</i>	rockweed gunnel
	Pholidae	Pholidae	gunnels
	Pomacentridae	<i>Chromis punctipinnis</i>	blacksmith
	Pomacentridae	Pomacentridae	damselishes
	Sciaenidae	<i>Atractoscion nobilis</i>	white seabass
	Sciaenidae	<i>Cheilotrema saturnum</i>	black croaker
	Sciaenidae	<i>Genyonemus lineatus</i>	white croaker
	Sciaenidae	<i>Menticirrhus undulatus</i>	California corbina
	Sciaenidae	<i>Roncador stearnsii</i>	spotfin croaker
	Sciaenidae	Sciaenidae	croakers
	Sciaenidae	<i>Seriphus politus</i>	queenfish
	Sciaenidae	<i>Umbrina roncador</i>	yellowfin croaker

CIQ gobies complex comprises larvae of *Clevelandia ios*, *Ilypnus gilberti* and/or *Quietula y-cuada*. (table continued)

Larval fish collected and identified from central California Outer Coast (continued)

Order	Family	Taxon	Common Name
Perciformes (continued)			
	Scombridae	<i>Scomber japonicus</i>	Pacific mackerel
	Scombridae	Scombridae	mackerels and tunas
	Serranidae	<i>Paralabrax clathratus</i>	kelp bass
	Serranidae	<i>Paralabrax nebulifer</i>	barred sand bass
	Serranidae	<i>Paralabrax</i> spp.	sea basses
	Sphyraenidae	<i>Sphyraena argentea</i>	Pacific barracuda
	Stichaeidae	<i>Anoplarchus purpureus</i>	high cockscomb
	Stichaeidae	Anoplarchus spp.	cockscombs
	Stichaeidae	<i>Cebidichthys violaceus</i>	monkeyface eel
	Stichaeidae	<i>Chirolophis nugator</i>	mosshead warbonnet
	Stichaeidae	<i>Plectobranhus evides</i>	bluebarred prickleback
	Stichaeidae	Stichaeidae	pricklebacks
	Stichaeidae	<i>Xiphister mucosus</i>	rock prickleback
	Stichaeidae	<i>Xiphister</i> spp.	pricklebacks
	Stromateidae	<i>Peprilus simillimus</i>	Pacific butterfish
	Tetragonuridae	<i>Tetragonurus cuvieri</i>	smalleye squaretail
Pleuronectiformes			
	Cynoglossidae	Cynoglossidae	tonguefishes
	Cynoglossidae	<i>Symphurus atricaudus</i>	California tonguefish
	Paralichthyidae	<i>Citharichthys sordidus</i>	Pacific sanddab
	Paralichthyidae	<i>Citharichthys</i> spp.	sanddabs
	Paralichthyidae	<i>Citharichthys stigmaeus</i>	speckled sanddab
	Paralichthyidae	<i>Hippoglossina stomata</i>	bigmouth sole
	Paralichthyidae	Paralichthyidae	sand flounders
	Paralichthyidae	<i>Paralichthys californicus</i>	California halibut
	Paralichthyidae	<i>Xystreureys liolepis</i>	fantail sole
	Pleuronectidae	<i>Embassichthys bathybius</i>	deepsea sole
	Pleuronectidae	<i>Glyptocephalus zachirus</i>	rex sole
	Pleuronectidae	<i>Hypsopsetta</i> spp.	turbots
	Pleuronectidae	<i>Isopsetta isolepis</i>	butter sole
	Pleuronectidae	<i>Lepidopsetta bilineata</i>	rock sole
	Pleuronectidae	<i>Lepidopsetta</i> spp.	soles
	Pleuronectidae	<i>Lyopsetta exilis</i>	slender sole
	Pleuronectidae	<i>Microstomus pacificus</i>	Dover sole
	Pleuronectidae	<i>Parophrys vetulus</i>	English sole
	Pleuronectidae	<i>Platichthys stellatus</i>	starry flounder
	Pleuronectidae	<i>Pleuronectes bilineatus</i>	rock sole
	Pleuronectidae	<i>Pleuronectes</i> spp.	righteye flounders
	Pleuronectidae	Pleuronectidae	righteye flounders
	Pleuronectidae	<i>Pleuronichthys coenosus</i>	c-o turbot

(table continued)

Larval fish collected and identified from central California Outer Coast (continued)

Order	Family	Taxon	Common Name
Pleuronectiformes (continued)			
	Pleuronectidae	<i>Pleuronichthys decurrens</i>	curlfin turbot
	Pleuronectidae	<i>Pleuronichthys guttulatus</i>	diamond turbot
	Pleuronectidae	<i>Pleuronichthys ritteri</i>	spotted turbot
	Pleuronectidae	<i>Pleuronichthys</i> spp.	turbots
	Pleuronectidae	<i>Pleuronichthys verticalis</i>	hornyhead turbot
	Pleuronectidae	<i>Psettichthys melanostictus</i>	sand sole
	Pleuronectidae	<i>Psettichthys</i> spp.	soles

Larval fish collected and identified from offshore of Ventura

Order	Family	Taxon	Common Name
Clupeiformes	Clupeidae	<i>Sardinops sagax</i>	Pacific sardine
	Engraulidae	Engraulidae	anchovies
	Engraulidae	<i>Engraulis mordax</i>	northern anchovy
Myctophiformes	Myctophidae	<i>Diaphus theta</i>	California headlight fish
	Myctophidae	Myctophidae	lanternfishes
	Myctophidae	<i>Nannobranchium</i> spp.	lanternfishes
	Myctophidae	<i>Stenobranchius leucopsarus</i>	northern lampfish
	Myctophidae	<i>Triphoturus mexicanus</i>	Mexican lampfish
Gadiformes	Merlucciidae	<i>Merluccius productus</i>	Pacific hake
Ophidiiformes	Ophidiidae	<i>Chilara taylora</i>	spotted cusk-eel
	Ophidiidae	Ophidiidae	cusk-eels
	Ophidiidae	<i>Ophidion scrippsae</i>	basketweave cusk-eel
Gasterosteiformes	Syngnathidae	<i>Syngnathus</i> spp.	pipefishes
Scorpaeniformes	Cyclopteridae	Cyclopteridae	snailfishes
	Hexagrammidae	<i>Zaniolepis latipinnis</i>	longspine combfish
	Liparidae	<i>Liparis</i> spp.	snailfishes
	Scorpaenidae	Scorpaenoidei	sculpins
	Scorpaenidae	<i>Scorpaena guttata</i>	California scorpionfish
	Scorpaenidae	<i>Sebastes levis</i>	cow cod
	Scorpaenidae	<i>Sebastes</i> spp.	rockfishes
Perciformes	Blennidae	<i>Hypsoblennius jenkinsi</i>	mussel blenny
	Blennidae	<i>Hypsoblennius</i> spp.	combtooth blennies
	Clinidae	Clinidae	kelp blennies
	Gobiidae	CIQ goby complex	gobies
	Gobiidae	<i>Lepidogobius lepidus</i>	bay goby
	Gobiidae	<i>Lythrypnus</i> spp.	gobies
	Gobiidae	<i>Rhinogobiops nicholsi</i>	blackeye goby
	Gobiidae	<i>Typhlogobius californiensis</i>	blind goby
	Labridae	Labridae	wrasses
	Labridae	<i>Oxyjulis californica</i>	senorita
	Labridae	<i>Semicossyphus pulcher</i>	California sheephead
	Pomacentridae	<i>Chromis punctipinnis</i>	blacksmith
	Pomacentridae	<i>Hypsypops rubicundus</i>	garibaldi
	Pomacentridae	Pomacentridae	damselfishes

CIQ gobies complex comprises larvae of *Clevelandia ios*, *Ilypnus gilberti* and/or *Quietula y-cuada*. (table continued)

Larval fish collected and identified from offshore of Ventura (continued)

Order	Family	Taxon	Common Name
Perciformes (continued)			
	Sciaenidae	<i>Genyonemus lineatus</i>	white croaker
	Sciaenidae	Sciaenidae	croakers
	Serranidae	<i>Paralabrax clathratus</i>	kelp bass
	Serranidae	<i>Paralabrax nebulifer</i>	barred sand bass
	Serranidae	<i>Paralabrax</i> spp.	sea basses
	Sphyraenidae	<i>Sphyraena argentea</i>	Pacific barracuda
Pleuronectiformes			
	Cynoglossidae	<i>Symphurus atricaudus</i>	California tonguefish
	Paralichthyidae	<i>Citharichthys sordidus</i>	Pacific sanddab
	Paralichthyidae	<i>Citharichthys</i> spp.	sanddabs
	Paralichthyidae	<i>Citharichthys stigmaeus</i>	speckled sanddab
	Paralichthyidae	<i>Hippoglossina stomata</i>	bigmouth sole
	Paralichthyidae	<i>Paralichthys californicus</i>	California halibut
	Pleuronectidae	<i>Lepidopsetta bilineata</i>	rock sole
	Pleuronectidae	<i>Lyopsetta exilis</i>	slender sole
	Pleuronectidae	<i>Parophrys vetulus</i>	English sole
	Pleuronectidae	Pleuronectidae	righteye flounders
	Pleuronectidae	<i>Pleuronichthys coenosus</i>	c-o turbot
	Pleuronectidae	<i>Pleuronichthys verticalis</i>	hornyhead turbot

Larval fish collected and identified from Santa Monica Bay

Order	Family	Taxon	Common Name
Clupeiformes	Clupeidae	<i>Clupea pallasii</i>	Pacific herring
	Clupeidae	<i>Etrumeus teres</i>	round herring
	Clupeidae	<i>Sardinops sagax</i>	Pacific sardine
	Engraulidae	Engraulidae	anchovies
	Engraulidae	<i>Engraulis mordax</i>	northern anchovy
Osmeriformes	Argentinidae	<i>Argentina sialis</i>	Pacific argentine
	Bathylagidae	Bathylagidae	blacksmelts
	Bathylagidae	<i>Leuroglossus stilbius</i>	California smoothtongue
	Bathylagidae	<i>Lipolagus ochotensis</i>	popeye blacksmelt
Stomiiformes	Gonostomatidae	<i>Cyclothone signata</i>	showy bristlemouth
Myctophiformes	Myctophidae	<i>Diaphus theta</i>	California headlight fish
	Myctophidae	Myctophidae	lanternfishes
	Myctophidae	<i>Nannobranchium</i> spp.	lanternfishes
	Myctophidae	<i>Stenobranchius leucopsarus</i>	northern lampfish
	Myctophidae	<i>Triphoturus mexicanus</i>	Mexican lampfish
Gadiformes	Merlucciidae	<i>Merluccius productus</i>	Pacific hake
Ophidiiformes	Bythitidae	<i>Brosmophycis marginata</i>	red brotula
	Ophidiidae	<i>Chilara taylori</i>	spotted cusk-eel
	Ophidiidae	Ophidiidae	cusk-eels
	Ophidiidae	<i>Ophidion scrippsae</i>	basketweave cusk-eel
Atheriniformes	Atherinopsidae	<i>Atherinops affinis</i>	topsmelt
	Atherinopsidae	Atherinopsidae	silversides
	Atherinopsidae	<i>Atherinopsis californiensis</i>	jacksmelt
	Atherinopsidae	<i>Leuresthes tenuis</i>	California grunion
Gasterosteiformes	Syngnathidae	Syngnathidae	pipefishes
	Syngnathidae	<i>Syngnathus leptorhynchus</i>	bay pipefish
	Syngnathidae	<i>Syngnathus</i> spp.	pipefishes
Scorpaeniformes	Agonidae	<i>Odontopyxis trispinosa</i>	pygmy poacher
	Cottidae	<i>Artedius lateralis</i>	smoothhead sculpin
	Cottidae	<i>Artedius</i> spp.	sculpins
	Cottidae	<i>Chitonotus pugetensis</i>	roughback sculpin
	Cottidae	<i>Chitonotus</i> spp./ <i>Icelinus</i> spp.	sculpins
	Cottidae	<i>Clinocottus analis</i>	wooly sculpin

(table continued)

Larval fish collected and identified from Santa Monica Bay (continued)

Order	Family	Taxon	Common Name
Scorpaeniformes (continued)			
	Cottidae	<i>Clinocottus</i> spp.	sculpins
	Cottidae	Cottidae	sculpins
	Cottidae	<i>Cottus asper</i>	prickly sculpin
	Cottidae	<i>Icelinus quadriseriatus</i>	yellowchin sculpin
	Cottidae	<i>Icelinus</i> spp.	sculpins
	Cottidae	<i>Leptocottus armatus</i>	Pacific staghorn sculpin
	Cottidae	<i>Oligocottus</i> spp.	sculpins
	Cottidae	<i>Oligocottus</i> spp./ <i>Clinocottus</i> spp.	sculpins
	Cottidae	<i>Ruscarius creaseri</i>	roughcheek sculpin
	Cottidae	<i>Ruscarius meanyi</i>	Puget Sound sculpin
	Cottidae	<i>Scorpaenichthys marmoratus</i>	cabezon
	Cyclopteridae	Cyclopteridae	snailfishes
	Hexagrammidae	Hexagrammidae	greenlings
	Hexagrammidae	<i>Oxylebius pictus</i>	painted greenling
	Hexagrammidae	<i>Zaniolepis frenata</i>	shortspine combfish
	Hexagrammidae	<i>Zaniolepis latipinnis</i>	longspine combfish
	Hexagrammidae	<i>Zaniolepis</i> spp.	combfishes
	Liparidae	<i>Liparis mucosus</i>	slimy snailfish
	Liparidae	<i>Liparis</i> spp.	snailfishes
	Scorpaenidae	<i>Scorpaena guttata</i>	California scorpionfish
	Scorpaenidae	Scorpaenidae	scorpion fishes
	Scorpaenidae	<i>Sebastes paucispinis</i>	bocaccio
	Scorpaenidae	<i>Sebastes</i> spp.	rockfishes
	Scorpaenidae	<i>Sebastolobus altivelis</i>	longspine thornyhead
	Scorpaenidae	<i>Sebastolobus</i> spp.	thornyheads
Perciformes			
	Bathymasteridae	Bathymasteridae	ronquils
	Blennidae	Blenniidae	blennies
	Blennidae	<i>Hypsoblennius jenkinsi</i>	mussel blenny
	Blennidae	<i>Hypsoblennius</i> spp.	combtooth blennies
	Carangidae	<i>Trachurus symmetricus</i>	jack mackerel
	Clinidae	<i>Gibbonsia</i> spp.	kelpfishes
	Clinidae	<i>Heterostichus rostratus</i>	giant kelpfish
	Chaenopsidae	Chaenopsidae	tube blennies
	Gobiesocidae	Gobiesocidae	clingfishes
	Gobiesocidae	<i>Gobiesox</i> spp.	clingfishes
	Gobiesocidae	<i>Rimicola</i> spp.	kelp clingfishes
	Gobiidae	<i>Acanthogobius flavimanus</i>	yellowfin goby
	Gobiidae	CIQ goby complex	gobies
	Gobiidae	<i>Gillichthys mirabilis</i>	longjaw mudsucker
	Gobiidae	<i>Lepidogobius lepidus</i>	bay goby
	Gobiidae	<i>Lythrypnus</i> spp.	gobies

 CIQ gobies complex comprises larvae of *Clevelandia ios*, *Ilypnus gilberti* and/or *Quietula y-cuada*.

(table continued)

Larval fish collected and identified from Santa Monica Bay (continued)

Order	Family	Taxon	Common Name
Perciformes (continued)			
	Gobiidae	<i>Lythrypnus zebra</i>	zebra goby
	Gobiidae	<i>Rhinogobiops nicholsi</i>	blackeye goby
	Gobiidae	<i>Typhlogobius californiensis</i>	blind goby
	Haemulidae	<i>Anisotremus davidsonii</i>	sargo
	Haemulidae	Haemulidae	grunts
	Haemulidae	<i>Xenistius californiensis</i>	salema
	Kyphosidae	<i>Girella nigricans</i>	opaleye
	Kyphosidae	Kyphosidae	sea chubs
	Kyphosidae	<i>Medialuna californiensis</i>	halfmoon
	Labridae	<i>Halichoeres semicinctus</i>	rock wrasse
	Labridae	Labridae	wrasses
	Labridae	<i>Oxyjulis californica</i>	senorita
	Labridae	<i>Semicossyphus pulcher</i>	California sheephead
	Labrisomidae	Labrisomidae	labrisomid blennies
	Pomacentridae	<i>Chromis punctipinnis</i>	blacksmith
	Pomacentridae	<i>Hypsypops rubicundus</i>	garibaldi
	Pomacentridae	Pomacentridae	damsel-fishes
	Sciaenidae	<i>Atractoscion nobilis</i>	white seabass
	Sciaenidae	<i>Cheilotrema saturnum</i>	black croaker
	Sciaenidae	<i>Genyonemus lineatus</i>	white croaker
	Sciaenidae	<i>Menticirrhus undulatus</i>	California corbina
	Sciaenidae	<i>Roncador stearnsii</i>	spotfin croaker
	Sciaenidae	Sciaenidae	croakers
	Sciaenidae	<i>Seriphus politus</i>	queenfish
	Sciaenidae	<i>Umbrina roncadore</i>	yellowfin croaker
	Serranidae	<i>Paralabrax clathratus</i>	kelp bass
	Serranidae	<i>Paralabrax maculatofasciatus</i>	spotted sand bass
	Serranidae	<i>Paralabrax</i> spp.	sea basses
	Sphyraenidae	<i>Sphyraena argentea</i>	Pacific barracuda
	Sphyraenidae	<i>Sphyraena</i> spp.	barracudas
	Stromateidae	<i>Peprilus simillimus</i>	Pacific butterfish
Pleuronectiformes			
	Cynoglossidae	Cynoglossidae	tonguefishes
	Cynoglossidae	<i>Symphurus atricaudus</i>	California tonguefish
	Paralichthyidae	<i>Citharichthys sordidus</i>	Pacific sanddab
	Paralichthyidae	<i>Citharichthys</i> spp.	sanddabs
	Paralichthyidae	<i>Citharichthys stigmaeus</i>	speckled sanddab
	Paralichthyidae	<i>Hippoglossina stomata</i>	bigmouth sole
	Paralichthyidae	Paralichthyidae	sand flounders
	Paralichthyidae	<i>Paralichthys californicus</i>	California halibut
	Paralichthyidae	<i>Xystreurus liolepis</i>	fantail sole

(table continued)

Larval fish collected and identified from Santa Monica Bay (continued)

Order	Family	Taxon	Common Name
Pleuronectiformes (continued)			
	Pleuronectidae	<i>Isopsetta isolepis</i>	butter sole
	Pleuronectidae	<i>Lepidopsetta bilineata</i>	rock sole
	Pleuronectidae	<i>Lyopsetta exilis</i>	slender sole
	Pleuronectidae	<i>Microstomus pacificus</i>	Dover sole
	Pleuronectidae	<i>Parophrys vetulus</i>	English sole
	Pleuronectidae	<i>Platichthys stellatus</i>	starry flounder
	Pleuronectidae	<i>Pleuronectes</i> spp.	righteye flounders
	Pleuronectidae	Pleuronectidae	righteye flounders
	Pleuronectidae	<i>Pleuronichthys guttulatus</i>	diamond turbot
	Pleuronectidae	<i>Pleuronichthys ritteri</i>	spotted turbot
	Pleuronectidae	<i>Pleuronichthys</i> spp.	turbots
	Pleuronectidae	<i>Pleuronichthys verticalis</i>	hornyhead turbot
	Pleuronectidae	<i>Psettichthys melanostictus</i>	sand sole

Larval fish collected and identified from offshore of Los Angeles

Order	Family	Taxon	Common Name
Clupeiformes			
	Clupeidae	Clupeidae	herrings
	Clupeidae	<i>Opisthonema</i> spp.	thread herrings
	Clupeidae	<i>Sardinops sagax</i>	Pacific sardine
	Engraulidae	Engraulidae	anchovies
	Engraulidae	<i>Engraulis mordax</i>	northern anchovy
Stomiiformes			
	Phosichthyidae	Vinciguerria spp.	lightfishes
Myctophiformes			
	Myctophidae	Myctophidae	lanternfishes
	Myctophidae	<i>Stenobranchius leucopsarus</i>	northern lampfish
	Myctophidae	<i>Triphoturus mexicanus</i>	Mexican lampfish
Ophidiiformes			
	Ophidiidae	Ophidiidae	cusks-eels
	Bythitidae	<i>Brosmophycis marginata</i>	red brotula
Gasterosteiformes			
	Macroramphosidae	<i>Macroramphosus gracilis</i>	slender snipefish
	Syngnathidae	Syngnathus spp.	pipefishes
Scorpaeniformes			
	Cottidae	<i>Oligocottus/Clinocottus</i> spp.	sculpins
	Hexagrammidae	<i>Oxylebius pictus</i>	painted greenling
	Scorpaenidae	Scorpaenidae	scorpion fishes
	Scorpaenidae	<i>Sebastes levis</i>	cow cod
	Scorpaenidae	Sebastes spp.	rockfishes
Perciformes			
	Blennidae	<i>Hypsoblennius</i> spp.	combtooth blennies
	Gobiidae	CIQ goby complex	gobies
	Gobiidae	<i>Lythrypnus dalli</i>	bluebanded goby
	Gobiidae	<i>Lythrypnus</i> spp.	gobies
	Gobiidae	<i>Lythrypnus zebra</i>	zebra goby
	Gobiidae	<i>Rhinogobiops nicholsi</i>	blackeye goby
	Gobiidae	<i>Typhlogobius californiensis</i>	blind goby
	Serranidae	<i>Paralabrax clathratus</i>	kelp bass
	Serranidae	<i>Paralabrax</i> spp.	sea basses
	Carangidae	Carangidae	jacks
	Carangidae	<i>Seriola lalandi</i>	yellowtail jack
	Carangidae	<i>Trachurus symmetricus</i>	jack mackerel
	Haemulidae	Haemulidae	grunts
	Haemulidae	<i>Xenistius californiensis</i>	salema
	Kyphosidae	<i>Girella nigricans</i>	opaleye
	Kyphosidae	<i>Medialuna californiensis</i>	halfmoon
	Labridae	<i>Halichoeres semicinctus</i>	rock wrasse
	Labridae	Labridae	wrasses

CIQ gobies complex comprises larvae of *Clevelandia ios*, *Ilypnus gilberti* and/or *Quietula y-cuada*.

(table continued)

Larval fish collected and identified from offshore of Los Angeles (continued)

Order	Family	Taxon	Common Name
Perciformes (continued)			
	Labridae	<i>Oxyjulis californica</i>	senorita
	Labridae	<i>Semicossyphus pulcher</i>	California sheephead
	Sciaenidae	<i>Atractoscion nobilis</i>	white seabass
	Sciaenidae	Sciaenidae	croakers
	Sciaenidae	<i>Seriphus politus</i>	queenfish
	Sciaenidae	<i>Umbrina roncador</i>	yellowfin croaker
	Pomacentridae	<i>Chromis punctipinnis</i>	blacksmith
	Pomacentridae	<i>Hypsypops rubicundus</i>	garibaldi
	Pomacentridae	Pomacentridae	damsel-fishes
	Sphyraenidae	<i>Sphyraena argentea</i>	Pacific barracuda
	Scombridae	<i>Sarda chiliensis</i>	Pacific bonito
	Scombridae	Scombridae	mackerels and tunas
	Stromateidae	<i>Peprilus simillimus</i>	Pacific butterfish
Mugilliformes			
	Mugilidae	<i>Mugil cephalus</i>	striped mullet
Pleuronectiformes			
	Cynoglossidae	<i>Symphurus atricaudus</i>	California tonguefish
	Cynoglossidae	<i>Symphurus</i> spp.	straightmouth tonguefishes
	Paralichthyidae	<i>Citharichthys sordidus</i>	Pacific sanddab
	Paralichthyidae	<i>Citharichthys</i> spp.	sanddabs
	Paralichthyidae	<i>Citharichthys stigmaeus</i>	speckled sanddab
	Paralichthyidae	<i>Paralichthys californicus</i>	California halibut
	Pleuronectidae	<i>Pleuronichthys coenosus</i>	c-o turbot
	Pleuronectidae	<i>Pleuronichthys</i> spp.	turbots
	Pleuronectidae	<i>Pleuronichthys verticalis</i>	hornyhead turbot

Larval fish collected and identified from Alamitos Bay and LA/LB Harbor Complex

Order	Family	Taxon	Common Name
Clupeiformes		Clupeiformes	herrings and anchovies
	Clupeidae	Clupeidae	herrings
	Clupeidae	<i>Sardinops sagax</i>	Pacific sardine
	Engraulidae	Engraulidae	anchovies
	Engraulidae	<i>Engraulis mordax</i>	northern anchovy
Osmeriformes			
	Bathylagidae	<i>Leuroglossus</i> spp.	smoothtongues
	Bathylagidae	<i>Leuroglossus stilbius</i>	California smoothtongue
	Bathylagidae	<i>Lipolagus ochotensis</i>	popeye blacksmelt
Myctophiformes			
	Myctophidae	<i>Diaphus theta</i>	California headlight fish
	Myctophidae	Myctophidae	lanternfishes
	Myctophidae	<i>Stenobranchius leucopsarus</i>	northern lampfish
	Myctophidae	<i>Triphoturus mexicanus</i>	Mexican lampfish
Gadiformes			
	Merlucciidae	<i>Merluccius productus</i>	Pacific hake
Ohpidiiformes			
	Ophidiidae	Ophidiidae	cusk-eels
	Ophidiidae	<i>Ophidion scrippsae</i>	basketweave cusk-eel
Atheriniformes			
	Atherinopsidae	<i>Atherinops affinis</i>	topsmelt
	Atherinopsidae	Atherinopsidae	silversides
	Atherinopsidae	<i>Atherinopsis californiensis</i>	jacksmelt
	Atherinopsidae	<i>Leuresthes tenuis</i>	California grunion
Gasterosteiformes			
	Syngnathidae	Syngnathidae	pipefishes
	Syngnathidae	<i>Syngnathus leptorhynchus</i>	bay pipefish
	Syngnathidae	<i>Syngnathus</i> spp.	pipefishes
Scorpaeniformes			
	Cottidae	<i>Artedius harringtoni</i>	scalyhead sculpin
	Cottidae	<i>Artedius lateralis</i>	smoothhead sculpin
	Cottidae	<i>Chitonotus pugetensis</i>	roughback sculpin
	Cottidae	<i>Chitonotus</i> spp./ <i>Icelinus</i> spp.	sculpins
	Cottidae	<i>Clinocottus analis</i>	wooly sculpin
	Cottidae	<i>Clinocottus</i> spp.	sculpins
	Cottidae	Cottidae	sculpins
	Cottidae	<i>Icelinus quadriseriatus</i>	yellowchin sculpin
	Cottidae	<i>Icelinus</i> spp.	sculpins
	Cottidae	<i>Leptocottus armatus</i>	Pacific staghorn sculpin
	Cottidae	<i>Oligocottus</i> spp.	sculpins
	Cottidae	<i>Oligocottus</i> spp./ <i>Clinocottus</i> spp.	sculpins
	Cottidae	<i>Orthonopias triacis</i>	snubnose sculpin

(table continued)

Larval fish collected and identified from Alamitos Bay and LA/LB Harbor Complex (continued)

Order	Family	Taxon	Common Name
Scorpaeniformes			
	Cottidae	<i>Ruscarius creaseri</i>	roughcheek sculpin
	Cottidae	<i>Scorpaenichthys marmoratus</i>	cabezon
	Hexagrammidae	Hexagrammidae	greenlings
	Hexagrammidae	<i>Oxylebius pictus</i>	painted greenling
	Hexagrammidae	<i>Zaniolepis frenata</i>	shortspine combfish
	Hexagrammidae	<i>Zaniolepis</i> spp.	combfishes
	Scorpaenidae	Scorpaenidae	scorpion fishes
	Scorpaenidae	<i>Sebastes</i> spp.	rockfishes
Perciformes			
	Bathymasteridae	Bathymasteridae	ronquils
	Blennidae	<i>Hypsoblennius gilberti</i>	rockpool blenny
	Blennidae	<i>Hypsoblennius jenkinsi</i>	mussel blenny
	Blennidae	<i>Hypsoblennius</i> spp.	combtooth blennies
	Clinidae	Clinidae	kelp blennies
	Clinidae	<i>Gibbonsia</i> spp.	kelpfishes
	Clinidae	<i>Heterostichus rostratus</i>	giant kelpfish
	Chaenopsidae	Chaenopsidae	tube blennies
	Chaenopsidae	<i>Neoclinus</i> spp.	fringeheads
	Gobiesocidae	Gobiesocidae	clingfishes
	Gobiesocidae	<i>Gobiesox</i> spp.	clingfishes
	Gobiidae	<i>Acanthogobius flavimanus</i>	yellowfin goby
	Gobiidae	CIQ goby complex	gobies
	Gobiidae	<i>Clevelandia ios</i>	arrow goby
	Gobiidae	<i>Gillichthys mirabilis</i>	longjaw mudsucker
	Gobiidae	<i>Ilypnus gilberti</i>	cheekspot goby
	Gobiidae	<i>Lepidogobius lepidus</i>	bay goby
	Gobiidae	<i>Lythrypnus</i> spp.	gobies
	Gobiidae	<i>Lythrypnus zebra</i>	zebra goby
	Gobiidae	<i>Quietula y-cauda</i>	shadow goby
	Gobiidae	<i>Rhinogobiops nicholsi</i>	blackeye goby
	Gobiidae	<i>Tridentiger trigonocephalus</i>	chameleon goby
	Gobiidae	<i>Typhlogobius californiensis</i>	blind goby
	Serranidae	<i>Paralabrax</i> spp.	sea basses
	Haemulidae	Haemulidae	grunts
	Haemulidae	<i>Xenistius californiensis</i>	salema
	Kyphosidae	<i>Girella nigricans</i>	opaleye
	Labridae	Labridae	wrasses
	Labridae	<i>Oxyjulis californica</i>	senorita
	Labridae	<i>Semicossyphus pulcher</i>	California sheephead
	Labrisomidae	Labrisomidae	labrisomid blennies
	Labrisomidae	<i>Paraclinus</i> spp.	clinid

CIQ gobies complex comprises larvae of *Clevelandia ios*, *Ilypnus gilberti* and/or *Quietula y-cauda*.

(table continued)

Larval fish collected and identified from Alamitos Bay and LA/LB Harbor Complex
 (continued)

Order	Family	Taxon	Common Name
Perciformes	Pomacentridae	<i>Hypsypops rubicundus</i>	garibaldi
	Pomacentridae	Pomacentridae	damsel fishes
	Sciaenidae	<i>Cheilotrema saturnum</i>	black croaker
	Sciaenidae	<i>Genyonemus lineatus</i>	white croaker
	Sciaenidae	<i>Menticirrhus undulatus</i>	California corbina
	Sciaenidae	<i>Roncador stearnsii</i>	spotfin croaker
	Sciaenidae	Sciaenidae	croakers
	Sciaenidae	<i>Seriphus politus</i>	queenfish
	Sciaenidae	<i>Umbrina roncador</i>	yellowfin croaker
	Sphyraenidae	<i>Sphyraena argentea</i>	Pacific barracuda
	Sphyraenidae	<i>Halichoeres semicinctus</i>	rock wrasse
	Stichaeidae	Stichaeidae	pricklebacks
	Stromateidae	<i>Peprilus simillimus</i>	Pacific butterfish
Pleuronectiformes	Cynoglossidae	Cynoglossidae	tonguefishes
	Cynoglossidae	<i>Symphurus atricaudus</i>	California tonguefish
	Paralichthyidae	<i>Citharichthys sordidus</i>	Pacific sanddab
	Paralichthyidae	<i>Citharichthys</i> spp.	sanddabs
	Paralichthyidae	<i>Citharichthys stigmaeus</i>	speckled sanddab
	Paralichthyidae	Paralichthyidae	sand flounders
	Paralichthyidae	<i>Paralichthys californicus</i>	California halibut
	Paralichthyidae	<i>Xystreurus liolepis</i>	fantail sole
	Pleuronectidae	<i>Isopsetta isolepis</i>	butter sole
	Pleuronectidae	<i>Lyopsetta exilis</i>	slender sole
	Pleuronectidae	<i>Parophrys vetulus</i>	English sole
	Pleuronectidae	Pleuronectidae	righteye flounders
	Pleuronectidae	<i>Pleuronichthys guttulatus</i>	diamond turbot
	Pleuronectidae	<i>Pleuronichthys ritteri</i>	spotted turbot
	Pleuronectidae	<i>Pleuronichthys</i> spp.	turbots
	Pleuronectidae	<i>Pleuronichthys verticalis</i>	hornyhead turbot

Larval fish collected and identified from Los Angeles Outer Coast

Order	Family	Taxon	Common Name
Clupeiformes			
	Engraulidae	Engraulidae	anchovies
	Engraulidae	<i>Engraulis mordax</i>	northern anchovy
Myctophiformes			
	Myctophidae	Myctophidae	lanternfishes
	Myctophidae	<i>Stenobranchius leucopsarus</i>	northern lampfish
	Myctophidae	<i>Triphoturus mexicanus</i>	Mexican lampfish
Atheriniformes			
	Atherinopsidae	Atherinopsidae	silversides
	Atherinopsidae	<i>Atherinopsis californiensis</i>	jacksmelt
Gasterosteiformes			
	Syngnathidae	<i>Syngnathus</i> spp.	pipefishes
Scorpaeniformes			
	Cottidae	Cottidae	sculpins
	Cottidae	<i>Leptocottus armatus</i>	Pacific staghorn sculpin
	Cottidae	<i>Ruscarius creaseri</i>	roughcheek sculpin
	Cottidae	<i>Scorpaenichthys marmoratus</i>	cabezón
	Hexagrammidae	<i>Oxylebius pictus</i>	painted greenling
	Scorpaenidae	Scorpaenidae	scorpion fishes
	Scorpaenidae	<i>Sebastes</i> spp.	rockfishes
Perciformes			
	Blennidae	<i>Hypsoblennius jenkinsi</i>	mussel blenny
	Blennidae	<i>Hypsoblennius</i> spp.	combtooth blennies
	Clinidae	<i>Gibbonsia</i> spp.	kelpfishes
	Chaenopsidae	Chaenopsidae	tube blennies
	Labrisomidae	Labrisomidae	labrisomid blennies
	Gobiesocidae	<i>Gobiesox</i> spp.	clingfishes
	Gobiidae	<i>Acanthogobius flavimanus</i>	yellowfin goby
	Gobiidae	CIQ goby complex	gobies
	Gobiidae	<i>Gillichthys mirabilis</i>	longjaw mudsucker
	Gobiidae	<i>Ilypnus gilberti</i>	cheekspot goby
	Gobiidae	<i>Lepidogobius lepidus</i>	bay goby
	Gobiidae	<i>Lythrypnus</i> spp.	gobies
	Gobiidae	<i>Rhinogobiops nicholsi</i>	blackeye goby
	Pomacentridae	Pomacentridae	damsel fishes
	Sciaenidae	<i>Atractoscion nobilis</i>	white seabass
	Sciaenidae	<i>Cheilotrema saturnum</i>	black croaker
	Sciaenidae	<i>Genyonemus lineatus</i>	white croaker
	Sciaenidae	Sciaenidae	croakers
	Sciaenidae	<i>Seriphus politus</i>	queenfish
	Scombridae	Scombridae	mackerels and tunas
Pleuronectiformes			
	Paralichthyidae	<i>Citharichthys sordidus</i>	Pacific sanddab
	Paralichthyidae	<i>Citharichthys</i> spp.	sanddabs

CIQ gobies complex comprises larvae of *Clevelandia ios*, *Ilypnus gilberti* and/or *Quietula y-cuada*. (table continued)

Larval fish collected and identified from Los Angeles Outer Coast (continued)

Order	Family	Taxon	Common Name
Pleuronectiformes (continued)			
	Paralichthyidae	<i>Citharichthys stigmaeus</i>	speckled sanddab
	Paralichthyidae	<i>Hippoglossina stomata</i>	bigmouth sole
	Paralichthyidae	Paralichthyidae	sand flounders
	Paralichthyidae	<i>Paralichthys californicus</i>	California halibut
	Paralichthyidae	<i>Xystreureys liolepis</i>	fantail sole
	Pleuronectidae	Pleuronectidae	righteye flounders
	Pleuronectidae	<i>Pleuronichthys guttulatus</i>	diamond turbot
	Pleuronectidae	<i>Pleuronichthys ritteri</i>	spotted turbot
	Pleuronectidae	<i>Pleuronichthys</i> spp.	turbots
	Pleuronectidae	<i>Pleuronichthys verticalis</i>	hornyhead turbot

Larval fish collected and identified from San Diego Outer Coast

Order	Family	Taxon	Common Name
Clupeiformes	Clupeidae	Clupeidae	herrings
	Clupeidae	<i>Sardinops sagax</i>	Pacific sardine
	Engraulidae	<i>Anchoa</i> spp.	bay anchovies
	Engraulidae	Engraulidae	anchovies
	Engraulidae	<i>Engraulis mordax</i>	northern anchovy
Osmeriformes	Bathylagidae	<i>Lipolagus ochotensis</i>	popeye blacksmelt
Aulopiformes	Synodontidae	<i>Synodus lucioceps</i>	California lizardfish
Myctophiformes	Myctophidae	<i>Diaphus theta</i>	California headlight fish
	Myctophidae	Myctophidae	lanternfishes
	Myctophidae	<i>Stenobranchius leucopsarus</i>	northern lampfish
	Myctophidae	<i>Triphoturus mexicanus</i>	Mexican lampfish
Gadiformes	Merlucciidae	<i>Merluccius productus</i>	Pacific hake
Ohpidiiformes	Ophidiidae	Ophidiidae	cusks-eels
Atheriniformes	Atherinopsidae	<i>Atherinops affinis</i>	topsmelt
	Atherinopsidae	Atherinopsidae	silversides
	Atherinopsidae	<i>Atherinopsis californiensis</i>	jacksmelt
	Atherinopsidae	<i>Leuresthes tenuis</i>	California grunion
Gasterosteiformes	Syngnathidae	<i>Syngnathus exilis</i>	barcheek pipefish
	Syngnathidae	<i>Syngnathus</i> spp.	pipefishes
Scorpaeniformes	Cottidae	<i>Artedius lateralis</i>	smoothhead sculpin
	Cottidae	Cottidae	sculpins
	Cottidae	<i>Leptocottus armatus</i>	Pacific staghorn sculpin
	Cottidae	<i>Oligocottus/Clinocottus</i> spp.	sculpins
	Cottidae	<i>Orthonopias triacis</i>	snubnose sculpin
	Cottidae	<i>Ruscarius creaseri</i>	roughcheek sculpin
	Cottidae	<i>Scorpaenichthys marmoratus</i>	cabezon
	Hexagrammidae	<i>Oxylebius pictus</i>	painted greenling
	Scorpaenidae	<i>Sebastes</i> spp.	rockfishes
Perciformes	Blennidae	<i>Hypsoblennius jenkinsi</i>	mussel blenny
	Blennidae	<i>Hypsoblennius</i> spp.	combtooth blennies
	Clinidae	Clinidae	kelp blennies
	Clinidae	<i>Gibbonsia</i> spp.	kelpfishes

(table continued)

Larval fish collected and identified from San Diego Outer Coast (continued)

Order	Family	Taxon	Common Name
Perciformes			
	Clinidae	<i>Heterostichus rostratus</i>	giant kelpfish
	Chaenopsidae	Chaenopsidae	tube blennies
	Gobiesocidae	Gobiesocidae	clingfishes
	Gobiesocidae	<i>Gobiesox</i> spp.	clingfishes
	Gobiesocidae	<i>Rimicola eigenmanni</i>	slender clingfish
	Gobiesocidae	<i>Rimicola</i> spp.	kelp clingfishes
	Gobiidae	<i>Acanthogobius flavimanus</i>	yellowfin goby
	Gobiidae	CIQ goby complex	gobies
	Gobiidae	<i>Gillichthys mirabilis</i>	longjaw mudsucker
	Gobiidae	<i>Lepidogobius lepidus</i>	bay goby
	Gobiidae	<i>Rhinogobiops nicholsi</i>	blackeye goby
	Gobiidae	<i>Typhlogobius californiensis</i>	blind goby
	Labrisomidae	Labrisomidae	labrisomid blennies
	Serranidae	<i>Paralabrax clathratus</i>	kelp bass
	Serranidae	<i>Paralabrax</i> spp.	sea basses
	Haemulidae	<i>Anisotremus davidsonii</i>	sargo
	Haemulidae	Haemulidae	grunts
	Haemulidae	<i>Xenistius californiensis</i>	salema
	Kyphosidae	<i>Girella nigricans</i>	opaleye
	Labridae	<i>Halichoeres semicinctus</i>	rock wrasse
	Labridae	Labridae	wrasses
	Labridae	<i>Oxyjulis californica</i>	senorita
	Labridae	<i>Semicossyphus pulcher</i>	California sheephead
	Sciaenidae	<i>Atractoscion nobilis</i>	white seabass
	Sciaenidae	<i>Cheilotrema saturnum</i>	black croaker
	Sciaenidae	<i>Genyonemus lineatus</i>	white croaker
	Sciaenidae	<i>Menticirrhus undulatus</i>	California corbina
	Sciaenidae	<i>Roncador stearnsii</i>	spotfin croaker
	Sciaenidae	Sciaenidae	croakers
	Sciaenidae	<i>Seriphus politus</i>	queenfish
	Sciaenidae	<i>Umbrina roncador</i>	yellowfin croaker
	Pomacentridae	<i>Hypsypops rubicundus</i>	garibaldi
	Sphyraenidae	<i>Sphyraena argentea</i>	Pacific barracuda
	Scombridae	<i>Sarda chiliensis</i>	Pacific bonito
	Stromateidae	<i>Peprilus simillimus</i>	Pacific butterfish
Pleuronectiformes			
	Cynoglossidae	<i>Symphurus atricaudus</i>	California tonguefish
	Paralichthyidae	<i>Citharichthys sordidus</i>	Pacific sanddab
	Paralichthyidae	<i>Citharichthys</i> spp.	sanddabs
	Paralichthyidae	<i>Citharichthys stigmaeus</i>	speckled sanddab
	Paralichthyidae	Paralichthyidae	sand flounders
	Paralichthyidae	<i>Paralichthys californicus</i>	California halibut
	Paralichthyidae	<i>Xystreurus liolepis</i>	fantail sole

 CIQ gobies complex comprises larvae of *Clevelandia ios*, *Ilypnus gilberti* and/or *Quietula y-cuada*.

(table continued)

Larval fish collected and identified from San Diego Outer Coast (continued)

Order	Family	Taxon	Common Name
Pleuronectiformes			
	Pleuronectidae	<i>Lyopsetta exilis</i>	slender sole
	Pleuronectidae	<i>Parophrys vetulus</i>	English sole
	Pleuronectidae	Pleuronectidae	righteye flounders
	Pleuronectidae	<i>Pleuronichthys guttulatus</i>	diamond turbot
	Pleuronectidae	<i>Pleuronichthys ritteri</i>	spotted turbot
	Pleuronectidae	<i>Pleuronichthys</i> spp.	turbots
	Pleuronectidae	<i>Pleuronichthys verticalis</i>	hornyhead turbot

Larval fish collected and identified from Aqua Hedionda Lagoon and outer coast

Order	Family	Taxon	Common Name
Clupeiformes		Clupeiformes	herrings and anchovies
	Clupeidae	Clupeidae	herrings
	Clupeidae	<i>Sardinops sagax</i>	Pacific sardine
	Engraulidae	<i>Anchoa delicatissima</i>	slough anchovy
	Engraulidae	Engraulidae	anchovies
	Engraulidae	<i>Engraulis mordax</i>	northern anchovy
Osmeriformes	Bathylagidae	<i>Lipolagus ochotensis</i>	popeye blacksmelt
Stomiiformes	Gonostomatidae	<i>Cyclothone acclinidens</i>	bent tooth bristlemouth
	Gonostomatidae	<i>Cyclothone</i> spp.	bristlemouths
Myctophiformes	Myctophidae	<i>Diaphus theta</i>	California headlight fish
	Myctophidae	Myctophidae	lanternfishes
	Myctophidae	<i>Nannobranchium ritteri</i>	broadfin lampfish
	Myctophidae	<i>Nannobranchium</i> spp.	lanternfishes
	Myctophidae	<i>Stenobranchius leucopsarus</i>	northern lampfish
	Myctophidae	<i>Symbolophorus californiensis</i>	California lanternfish
	Myctophidae	<i>Triphoturus mexicanus</i>	Mexican lampfish
Batrachoidiformes	Batrachoididae	<i>Porichthys myriaster</i>	specklefin midshipman
Ohpidiiformes	Ophidiidae	<i>Chilara taylori</i>	spotted cusk-eel
	Ophidiidae	Ophidiidae	cusk-eels
	Ophidiidae	<i>Ophidion scrippsae</i>	basketweave cusk-eel
Beloniformes	Hemiramphidae	<i>Hyporhamphus rosae</i>	California halfbeak
Atheriniformes	Atherinopsidae	<i>Atherinops affinis</i>	topsmelt
	Atherinopsidae	Atherinopsidae	silversides
	Atherinopsidae	<i>Atherinopsis californiensis</i>	jacksmelt
	Atherinopsidae	<i>Leuresthes tenuis</i>	California grunion
Gasterosteiformes	Syngnathidae	<i>Cosmocampus arctus</i>	snubnose pipefish
	Syngnathidae	Syngnathidae	pipefishes
	Syngnathidae	<i>Syngnathus californiensis</i>	kelp pipefish
	Syngnathidae	<i>Syngnathus leptorhynchus</i>	bay pipefish
	Syngnathidae	<i>Syngnathus</i> spp.	pipefishes
Scorpaeniformes	Agonidae	Agonidae	poachers
	Cottidae	<i>Clinocottus analis</i>	wooly sculpin
	Cottidae	<i>Clinocottus</i> spp.	sculpins
	Cottidae	<i>Icelinus</i> spp.	sculpins

(table continued)

Larval fish collected and identified from Aqua Hedionda Lagoon and adjacent outer coast (continued)

Order	Family	Taxon	Common Name
Scorpaeniformes (continued)			
	Cottidae	<i>Leptocottus armatus</i>	Pacific staghorn sculpin
	Cottidae	<i>Oligocottus</i> spp.	sculpins
	Cottidae	<i>Ruscarius creaseri</i>	roughcheek sculpin
	Scorpaenidae	<i>Sebastes jordani</i>	shortbelly rockfish
	Scorpaenidae	<i>Sebastes</i> spp.	rockfishes
	Hexagrammidae	Hexagrammidae	greenlings
	Hexagrammidae	<i>Zaniolepis frenata</i>	shortspine combfish
Perciformes			
	Blennidae	<i>Hypsoblennius gentilis</i>	bay blenny
	Blennidae	<i>Hypsoblennius jenkinsi</i>	mussel blenny
	Blennidae	<i>Hypsoblennius</i> spp.	combtooth blennies
	Carangidae	<i>Trachurus symmetricus</i>	jack mackerel
	Chaenopsidae	Chaenopsidae	tube blennies
	Clinidae	Clinidae	kelp blennies
	Clinidae	<i>Gibbonsia</i> spp.	kelpfishes
	Clinidae	<i>Heterostichus rostratus</i>	giant kelpfish
	Gobiidae	<i>Acanthogobius flavimanus</i>	yellowfin goby
	Gobiidae	CIQ goby complex	gobies
	Gobiidae	<i>Clevelandia ios</i>	arrow goby
	Gobiidae	<i>Gillichthys mirabilis</i>	longjaw mudsucker
	Gobiidae	<i>Ilypnus gilberti</i>	cheekspot goby
	Gobiidae	<i>Lepidogobius lepidus</i>	bay goby
	Gobiidae	<i>Quietula y-cauda</i>	shadow goby
	Gobiidae	<i>Rhinogobiops nicholsi</i>	blackeye goby
	Gobiidae	<i>Typhlogobius californiensis</i>	blind goby
	Gobiesocidae	Gobiesocidae	clingfishes
	Gobiesocidae	<i>Gobiesox</i> spp.	clingfishes
	Gobiesocidae	<i>Rimicola eigenmanni</i>	slender clingfish
	Gobiesocidae	<i>Rimicola</i> spp.	kelp clingfishes
	Haemulidae	<i>Anisotremus davidsonii</i>	sargo
	Haemulidae	Haemulidae	grunts
	Haemulidae	<i>Xenistius californiensis</i>	salema
	Kyphosidae	<i>Girella nigricans</i>	opaleye
	Kyphosidae	Kyphosidae	sea chubs
	Kyphosidae	<i>Medialuna californiensis</i>	halfmoon
	Labridae	<i>Halichoeres semicinctus</i>	rock wrasse
	Labridae	Labridae	wrasses
	Labridae	<i>Oxyjulis californica</i>	senorita
	Labridae	<i>Semicossyphus pulcher</i>	California sheephead

CIQ gobies complex comprises larvae of *Clevelandia ios*, *Ilypnus gilberti* and/or *Quietula y-cauda*.

(table continued)

Larval fish collected and identified from Aqua Hedionda Lagoon and adjacent outer coast (continued)

Order	Family	Taxon	Common Name
Perciformes			
	Labrisomidae	Labrisomidae	labrisomid blennies
	Labrisomidae	<i>Paraclinus</i> spp.	clinid
	Pomacentridae	<i>Chromis punctipinnis</i>	blacksmith
	Pomacentridae	<i>Hypsypops rubicundus</i>	garibaldi
	Pomacentridae	Pomacentridae	damsel-fishes
	Serranidae	<i>Paralabrax clathratus</i>	kelp bass
	Serranidae	<i>Paralabrax nebulifer</i>	barred sand bass
	Serranidae	<i>Paralabrax</i> spp.	sea basses
	Sciaenidae	<i>Atractoscion nobilis</i>	white seabass
	Sciaenidae	<i>Cheilotrema saturnum</i>	black croaker
	Sciaenidae	<i>Genyonemus lineatus</i>	white croaker
	Sciaenidae	<i>Menticirrhus undulatus</i>	California corbina
	Sciaenidae	<i>Roncador stearnsii</i>	spotfin croaker
	Sciaenidae	Sciaenidae	croakers
	Sciaenidae	<i>Seriphus politus</i>	queenfish
	Sciaenidae	<i>Umbrina roncador</i>	yellowfin croaker
	Scombridae	<i>Scomber japonicus</i>	Pacific mackerel
	Sphyraenidae	<i>Sphyraena argentea</i>	Pacific barracuda
	Stromateidae	<i>Peprilus simillimus</i>	Pacific butterfish
Pleuronectiformes			
	Cynoglossidae	Cynoglossidae	tonguefishes
	Cynoglossidae	<i>Symphurus atricaudus</i>	California tonguefish
	Paralichthyidae	<i>Citharichthys sordidus</i>	Pacific sanddab
	Paralichthyidae	<i>Citharichthys</i> spp.	sanddabs
	Paralichthyidae	<i>Citharichthys stigmaeus</i>	speckled sanddab
	Paralichthyidae	<i>Hippoglossina stomata</i>	bigmouth sole
	Paralichthyidae	Paralichthyidae	sand flounders
	Paralichthyidae	<i>Paralichthys californicus</i>	California halibut
	Paralichthyidae	<i>Xystreureys liolepis</i>	fantail sole
	Pleuronectidae	<i>Lyopsetta exilis</i>	slender sole
	Pleuronectidae	<i>Parophrys vetulus</i>	English sole
	Pleuronectidae	Pleuronectidae	righteye flounders
	Pleuronectidae	<i>Pleuronichthys guttulatus</i>	diamond turbot
	Pleuronectidae	<i>Pleuronichthys ritteri</i>	spotted turbot
	Pleuronectidae	<i>Pleuronichthys</i> spp.	turbots
	Pleuronectidae	<i>Pleuronichthys verticalis</i>	hornyhead turbot

Larval fish collected and identified from San Diego Bay

Order	Family	Taxon	Common Name
Clupeiformes	Clupeidae	Clupeidae	herrings
	Engraulidae	<i>Anchoa delicatissima</i>	slough anchovy
	Engraulidae	<i>Anchoa</i> spp.	bay anchovies
	Engraulidae	Engraulidae	anchovies
	Engraulidae	<i>Engraulis mordax</i>	northern anchovy
Myctophiformes	Myctophidae	<i>Nannobranchium</i> spp.	lanternfishes
Batrachoidiformes	Batrachoididae	<i>Porichthys myriaster</i>	specklefin midshipman
Perciformes	Gobiesocidae	<i>Gobiesox rhesodon</i>	California clingfish
	Gobiesocidae	<i>Gobiesox</i> spp.	clingfishes
Beloniformes	Belonidae	<i>Strongylura exilis</i>	California needlefish
	Hemiramphidae	<i>Hyporhamphus rosae</i>	California halfbeak
Atheriniformes	Atherinopsidae	<i>Atherinops affinis</i>	topsmelt
	Atherinopsidae	Atherinopsidae	silversides
	Atherinopsidae	<i>Atherinopsis californiensis</i>	jacksmelt
	Atherinopsidae	<i>Leuresthes tenuis</i>	California grunion
Gasterosteiformes	Syngnathidae	<i>Hippocampus ingens</i>	Pacific seahorse
	Syngnathidae	<i>Syngnathus leptorhynchus</i>	bay pipefish
	Syngnathidae	<i>Syngnathus</i> spp.	pipefishes
Scorpaeniformes	Agonidae	<i>Odontopyxis trispinosa</i>	pygmy poacher
	Cottidae	<i>Artedius</i> spp.	sculpins
	Cottidae	<i>Clinocottus analis</i>	wooly sculpin
	Cottidae	Cottidae	sculpins
	Cottidae	<i>Leptocottus armatus</i>	Pacific staghorn sculpin
	Cottidae	<i>Oligocottus</i> spp.	sculpins
	Cottidae	<i>Ruscarius creaseri</i>	roughcheek sculpin
	Scorpaenidae	<i>Sebastes</i> spp.	rockfishes
Perciformes	Blennidae	<i>Hypsoblennius jenkinsi</i>	mussel blenny
	Blennidae	<i>Hypsoblennius</i> spp.	combtooth blennies
	Carangidae	<i>Trachurus symmetricus</i>	jack mackerel
	Clinidae	<i>Gibbonsia</i> spp.	kelpfishes
	Chaenopsidae	Chaenopsidae	tube blennies
	Gobiidae	<i>Acanthogobius flavimanus</i>	yellowfin goby
	Gobiidae	CIQ goby complex	gobies
	Gobiidae	<i>Clevelandia ios</i>	arrow goby

CIQ gobies complex comprises larvae of *Clevelandia ios*, *Ilypnus gilberti* and/or *Quietula y-cuada*.

(table continued)

Larval fish collected and identified from San Diego Bay (continued)

Order	Family	Taxon	Common Name
Perciformes (continued)			
	Gobiidae	<i>Gillichthys mirabilis</i>	longjaw mudsucker
	Gobiidae	<i>Ilypnus gilberti</i>	cheekspot goby
	Gobiidae	<i>Lepidogobius lepidus</i>	bay goby
	Gobiidae	<i>Quietula y-cauda</i>	shadow goby
	Gobiidae	<i>Typhlogobius californiensis</i>	blind goby
	Labridae	Labridae	wrasses
	Labrisomidae	Labrisomidae	labrisomid blennies
	Sciaenidae	<i>Atractoscion nobilis</i>	white seabass
	Sciaenidae	<i>Cheilotrema saturnum</i>	black croaker
	Sciaenidae	<i>Genyonemus lineatus</i>	white croaker
	Sciaenidae	<i>Menticirrhus undulatus</i>	California corbina
	Sciaenidae	<i>Roncador stearnsii</i>	spotfin croaker
	Sciaenidae	Sciaenidae	croakers
	Serranidae	<i>Paralabrax clathratus</i>	kelp bass
	Serranidae	<i>Paralabrax</i> spp.	sea basses
	Serranidae	Serranidae	sea basses
Pleuronectiformes			
	Paralichthyidae	<i>Citharichthys</i> spp.	sanddabs
	Paralichthyidae	<i>Citharichthys stigmaeus</i>	speckled sanddab
	Paralichthyidae	Paralichthyidae	sand flounders
	Paralichthyidae	<i>Paralichthys californicus</i>	California halibut
	Pleuronectidae	<i>Pleuronichthys guttulatus</i>	diamond turbot
	Pleuronectidae	<i>Pleuronichthys ritteri</i>	spotted turbot

CIQ gobies complex comprises larvae of *Clevelandia ios*, *Ilypnus gilberti* or *Quietula y-cauda*.